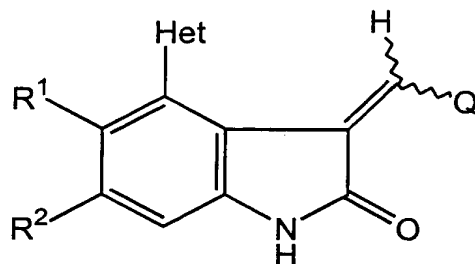


**WHAT IS CLAIMED:**

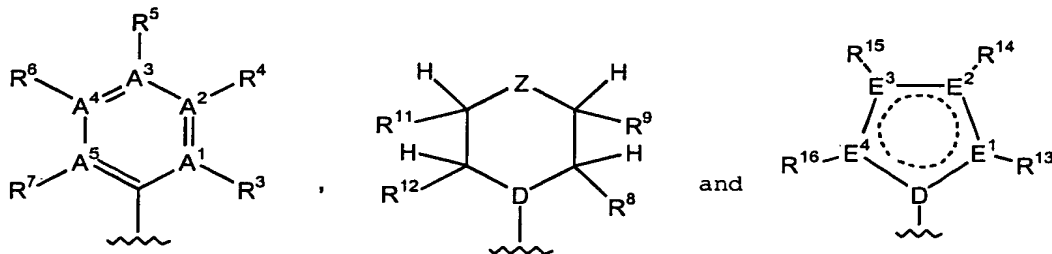
1. A compound comprising the chemical structure:



wherein:

- 5  $R^1$  and  $R^2$  are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, halo,  $-CX_3$ , hydroxy, alkoxy, nitro, cyano,  $-C(O)R^{26}$ ,  $-C(O)OR^{26}$ ,  $R^{26}C(O)O-$ ,  $-C(O)NR^{28}R^{29}$ ,  $R^{26}C(O)NR^{28}-$ ,  $-NR^{28}R^{29}$ ,  $-S(O)_2R^{26}$ ,  $-S(O)_2OR^{26}$ ,  $-S(O)_2NR^{28}R^{29}$ ,  $R^{26}S(O)_2NR^{28}-$ ,  $X_3CS(O)_2-$  and  $X_3CS(O)_2NR^{28}-$  where X is F, Cl, Br, or I;

Het is selected from the group consisting of:



wherein:

- 15  $A^1$ ,  $A^2$ ,  $A^3$ ,  $A^4$ , and  $A^5$  are selected from the group consisting of carbon and nitrogen with the proviso that at least one and no more than two of  $A^1$ ,  $A^2$ ,  $A^3$ ,  $A^4$ , and  $A^5$  are nitrogen;
- 20  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  are independently selected from the group consisting of hydrogen, alkyl, halo, hydroxy, alkoxy,  $X_3C-$ , nitro, cyano,  $-NR^{28}R^{29}$ ,  $-C(O)OR^{26}$  and  $-C(O)NR^{28}R^{29}$  where X is as defined above; it being understood that when  $A^1$ ,  $A^2$ ,  $A^3$ ,  $A^4$  or  $A^5$  is nitrogen,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  or  $R^7$ , respectively, does not exist;

D is carbon or nitrogen;

$R^8$ ,  $R^9$ ,  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen, alkyl, hydroxy, alkoxy, halo, nitro,

5 cyano and  $-NR^{28}R^{29}$ ;

Z is selected from the group consisting of oxygen, sulfur, and  $-NR^{10}$ ;

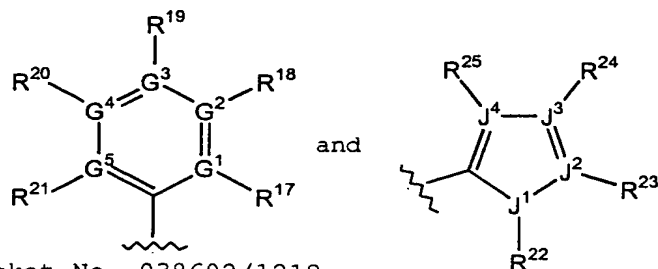
$R^{10}$  is selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl,  $-C(O)R^{26}$ ,  $-C(S)R^{26}$ ,  $-C(O)OR^{26}$ , -  
10  $C(O)NR^{28}R^{29}$ ,  $-C(S)NR^{28}R^{29}$ ,  $-C(NH)NR^{28}R^{29}$  and  $-S(O)_2R^{26}$ ;

$E^1$ ,  $E^2$ ,  $E^3$  and  $E^4$  are selected from the group consisting of carbon, nitrogen, oxygen and sulfur with the proviso that when D is carbon then at least one of  $E^1$ ,  $E^2$ ,  $E^3$  and  $E^4$  is other than carbon and that no more than one of  $E^1$ ,  $E^2$ ,  $E^3$  or  $E^4$  is oxygen  
15 or sulfur;

the dotted circle inside the five-member ring contain D,  $E^1$ ,  $E^2$ ,  $E^3$  and  $E^4$  ring means that the ring system is aromatic;

$R^{13}$ ,  $R^{14}$ ,  $R^{15}$  and  $R^{16}$  are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl,  
20 heteroaryl, heteroalicyclic, hydroxy, alkoxy, mercapto, thioalkoxy, halo, nitro, cyano,  $-C(O)R^{26}$ ,  $-C(O)OR^{26}$ ,  $-C(O)NR^{28}R^{29}$  and  $-NR^{28}R^{29}$ , it being understood that, when one of  $E^1$ ,  $E^2$ ,  $E^3$  or  $E^4$  is sulfur or oxygen and any of the others is nitrogen, there is no R group bonded to any of those nitrogens, it also being  
25 understood that, when two or three of  $E^1$ ,  $E^2$ ,  $E^3$  or  $E^4$  are nitrogen, there is an R group bonded to one of the nitrogens and that R group is selected from the group consisting of hydrogen and alkyl, there being no R group bonded to any of the other nitrogens;

30 Q is selected from the group consisting of:



where:

$G^1, G^2, G^3, G^4$  and  $G^5$  are selected from the group consisting of carbon and nitrogen with the proviso that no more than two of  $G^1, G^2, G^3, G^4$  and  $G^5$  are nitrogen;

5  $R^{17}, R^{18}, R^{19}, R^{20}$  and  $R^{21}$  are independently selected from the group consisting of hydrogen, alkyl, hydroxy, alkoxy, halo,  $-NR^{28}R^{29}, -(CH_2)_n C(O)R^{26}, -(CH_2)_n C(O)OR^{26}$  and  $-(CH_2)_n C(O)NR^{28}R^{29}, -(CH_2)_n NR^{28}R^{29}, -(CH_2)_n S(O)_2R^{26}$  and  $-(CH_2)_n S(O)_2NR^{28}R^{29};$

10  $J^1$  is selected from the group consisting of nitrogen, oxygen and sulfur such that when  $J^1$  is nitrogen,  $R^{22}$  is selected from the group consisting of hydrogen, alkyl and  $-C(O)R^{26};$  and when  $J^1$  is oxygen or sulfur,  $R^{22}$  does not exist;

15  $J^2, J^3$  and  $J^4$  are selected from the group consisting of carbon and nitrogen;

$R^{23}, R^{24}$  and  $R^{25}$  are independently selected from the group consisting of hydrogen, alkyl, aryl optionally substituted with one or more groups independently selected from the group consisting of hydroxy, unsubstituted lower alkoxy and halo, halo,  $-(CH_2)_n C(O)R^{26}, -(CH_2)_n C(O)OR^{26}$  and  $-(CH_2)_n C(O)NR^{28}R^{29}, -(CH_2)_n NR^{28}R^{29}, -(CH_2)_n S(O)_2R^{26}, -(CH_2)_n S(O)_2NR^{28}R^{29}, -(CH_2)_n OR^{26}, -O(CH_2)_n NR^{28}R^{29}$  and  $-C(O)NH(CH_2)_n NR^{28}R^{29};$

$n$  is 0, 1, 2, or 3;

$R^{23}$  and  $R^{24}$  or  $R^{24}$  and  $R^{25}$  may combine to form a group selected from the group consisting of  $-CH_2CH_2CH_2CH_2-$ ,  $-CH=CR^{33}-$   $CR^{34}=CH-$  and

30  $-C(O)Y(CH_2)_2-$  and group wherein  $Y$  is selected from the group consisting of oxygen, sulfur and  $-N(R^{27})-$  and  $R^{33}$  and  $R^{34}$  are selected from the group consisting of hydrogen,  $-(CH_2)_n NR^{28}R^{29}$  and  $-O(CH_2)_n NR^{28}R^{29}$  where, when one of  $R^{33}$  or  $R^{34}$  is  $-(CH_2)_n NR^{28}R^{29}$  or  $-O(CH_2)_n NR^{28}R^{29}$ , the other is hydrogen;

35 it being understood that, when  $J^2, J^3$  or  $J^4$  is nitrogen,  $R^{23}, R^{24}$

or R<sup>25</sup>, respectively, does not exist;

R<sup>26</sup> is selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl and heteroaryl;

5 R<sup>27</sup> is selected from the group consisting of hydrogen and alkyl;

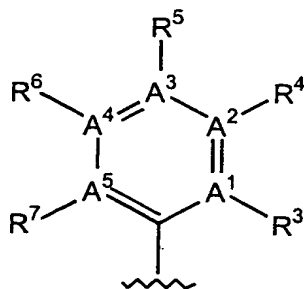
R<sup>28</sup> and R<sup>29</sup> are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, -(CH<sub>2</sub>)<sub>n</sub>aryl, -(CH<sub>2</sub>)<sub>n</sub>heteroaryl and -C(O)R<sup>26</sup>, or, combined, R<sup>28</sup> and R<sup>29</sup> may form a group selected from the group consisting of -(CH<sub>2</sub>)<sub>5</sub>-,  
10 -(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>-, -(CH<sub>2</sub>)<sub>2</sub>NR<sup>30</sup>(CH<sub>2</sub>)<sub>2</sub>- and -(CH)<sub>3</sub>C(O)- wherein R<sup>30</sup> is selected from the group consisting of hydrogen, alkyl, -C(O)R<sup>26</sup>, -S(O)<sub>2</sub>R<sup>26</sup>, -S(O)<sub>3</sub>R<sup>26</sup>, -S(O)<sub>2</sub>NR<sup>31</sup>R<sup>32</sup>, -C(O)NHNHNR<sup>31</sup>R<sup>32</sup>, -C(O)NR<sup>31</sup>R<sup>32</sup>, -C(S)NR<sup>31</sup>R<sup>32</sup> and -C(O)OR<sup>26</sup> where R<sup>31</sup> and R<sup>32</sup> are independently selected from the group consisting of hydrogen,  
15 unsubstituted lower alkyl and aryl optionally substituted with one or more groups independently selected from the group consisting of halo and unsubstituted lower alkoxy; or a pharmaceutically acceptable salt thereof; provided that: the compound of formula (I) is not:

20 (Z)-1,3-dihydro-3-[(1H-pyrrol-2-yl)methylene]-4-(2-thiophenyl)-2H-indol-2-one; and

Z)-1,3-dihydro-4-(2,4-dimethoxy-6-pyrimidinyl)-3-[(1H-pyrrol-2-yl)methylene]-2H-indol-2-one.

25 2. The compound of claim 1, wherein R<sup>1</sup> and R<sup>2</sup> are hydrogen.

3. The compound of claim 1, wherein Het is:



wherein:

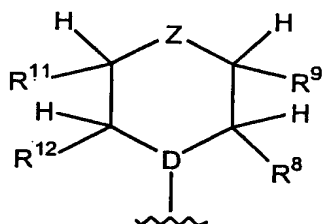
A<sup>1</sup> or A<sup>2</sup> or A<sup>3</sup> or A<sup>2</sup> and A<sup>4</sup> are nitrogen;

the A's which are not nitrogen are carbon; and

the R groups on the A's that are carbon are independently selected from the group consisting of hydrogen, -NH<sub>2</sub> and -C(O)OR<sup>26</sup> where R<sup>26</sup> is selected from the group consisting of hydrogen and unsubstituted lower alkyl.

4. The compound of claim 3, wherein Het is 4-pyridyl or 5-pyrimidinyl.

5. The compound of claim 1, wherein Het is:



wherein:

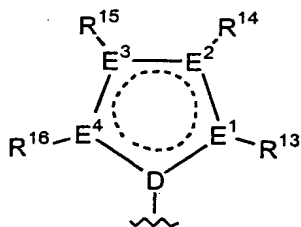
D is carbon;

R<sup>8</sup>, R<sup>9</sup>, R<sup>11</sup> and R<sup>12</sup> are hydrogen; and

Z is -NR<sup>10</sup> where R<sup>10</sup> is selected from the group consisting of -C(O)R<sup>26</sup>, -C(O)OR<sup>26</sup>, -C(O)NR<sup>28</sup>R<sup>29</sup>, -C(S)NR<sup>28</sup>R<sup>29</sup> and -C(NH)NR<sup>28</sup>R<sup>29</sup>.

6. The compound of claim 5, wherein Het is piperidin-4-yl.

7. The compound of claim 1, wherein Het is:



wherein:

D is carbon;

E<sup>1</sup> is sulfur;

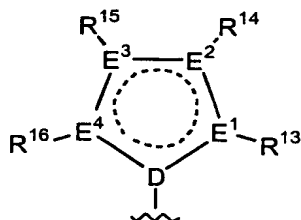
5 E<sup>2</sup> and E<sup>3</sup> are carbon;

E<sup>4</sup> is nitrogen;

R<sup>13</sup> and R<sup>16</sup> do not exist; and,

R<sup>14</sup> and R<sup>15</sup> are hydrogen.

10 8. The compound of claim 1, wherein Het is:



wherein:

D is carbon;

E<sup>1</sup> and E<sup>3</sup> are carbon;

E<sup>2</sup> is nitrogen;

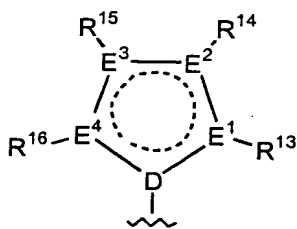
15 E<sup>4</sup> is sulfur;

R<sup>13</sup> is hydrogen;

R<sup>14</sup> and R<sup>16</sup> do not exist; and,

R<sup>15</sup> is -NR<sup>28</sup>R<sup>29</sup>.

20 9. The compound of claim 1, wherein Het is:



wherein:

D is carbon;

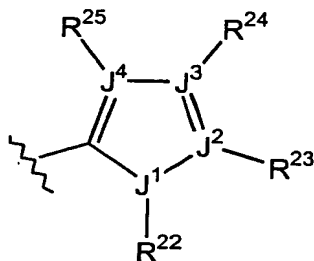
E<sup>1</sup> and E<sup>4</sup> are carbon;

E<sup>2</sup> and E<sup>3</sup> are nitrogen;

5 R<sup>13</sup> and R<sup>16</sup> are hydrogen; and,

R<sup>14</sup> and R<sup>15</sup> do not exist.

10. The compound of claim 1, wherein Q is:



wherein:

10 J<sup>1</sup> is nitrogen;

J<sup>2</sup>, J<sup>3</sup> and J<sup>4</sup> are carbon; and

R<sup>22</sup> is hydrogen.

11. The compound of claim 10, wherein:

15 R<sup>23</sup> is selected from the group consisting of hydrogen, unsubstituted lower alkyl, -C(O)OR<sup>26</sup>, -C(O)NR<sup>28</sup>R<sup>29</sup> or R<sup>23</sup> combined with R<sup>24</sup> form -(CH<sub>2</sub>)<sub>5</sub>- and -CH=CH-CR<sup>34</sup>=CH- where R<sup>26</sup> is hydrogen or unsubstituted lower alkyl; R<sup>34</sup> is selected from the group consisting of hydrogen and -O(CH<sub>2</sub>)NR<sup>28</sup>R<sup>29</sup> and R<sup>28</sup> and R<sup>29</sup> are independently selected from the group consisting of

20 hydrogen, unsubstituted lower alkyl and, R<sup>28</sup> and R<sup>29</sup> combined, form a group selected from the group consisting of - (CH<sub>2</sub>)<sub>2</sub>N(R<sup>30</sup>)(CH<sub>2</sub>)<sub>2</sub>-,

$-(CH_2)_2O(CH_2)_2-$  and  $-(CH_2)_5-$ , wherein  $R^{30}$  is selected from the group consisting of hydrogen and unsubstituted lower alkyl

12. The compound of claim 11, wherein  $R^{24}$  and  $R^{25}$  are independently selected from the group consisting of:

hydrogen;

unsubstituted lower alkyl;

aryl optionally substituted with a group selected from the group consisting of halo, unsubstituted lower alkoxy;

morpholino and 4-formylpiperidinyl;

$-(CH_2)_n C(O)NR^{28}R^{29}$ ;

$-(CH_2)_n C(O)OR^{26}$ ;

$-(CH_2)_n NR^{28}R^{29}$ ;

$-(CH_2)_n OR^{26}$ ,

$-C(O)NH(CH_2)_n NR^{28}R^{29}$ ;

$-O(CH_2)_n NR^{28}R^{29}$ ;

$-O(CH_2)_n OR^{26}$ , and, when  $R^{24}$  is not combined with  $R^{23}$ ,

$R^{24}$  and  $R^{25}$  combined form a group selected from the group consisting of:

$-(CH_2)_2OC(O)-$ ;

$-(CH_2)_2N(R^{30})C(O)-$ ;

$-(CH_2)_5-$ ; and

$-CH=CH-CH=CH-$ ;

where  $R^{26}$  is selected from the group consisting of hydrogen and

unsubstituted lower alkyl;  $R^{28}$  and  $R^{29}$  are independently selected from the group consisting of hydrogen, unsubstituted lower alkyl, lower alkyl substituted with a phenyl or a pyridyl group or, combined, a group selected from the group consisting of  $-(CH_2)_5-$ ,  $-(CH_2)_2NR^{30}(CH_2)_2-$  and  $-(CH_2)_2O(CH_2)_2-$

where  $R^{30}$  is selected from the group consisting of hydrogen, unsubstituted lower alkyl and

$-C(O)R^{26}$  where  $R^{26}$  is as defined above.

13. The compound of claim 1, wherein Q is 3,5-dimethyl-4-(4-methylpiperazin-1-yl-carbonyl)-1H-pyrrol-2-yl, 5-(methyl-



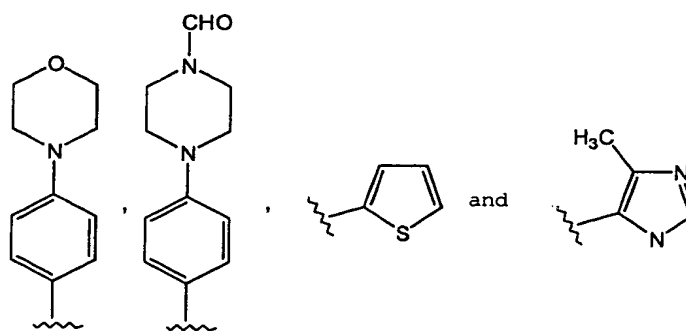
3H-imidazol-4-yl)-1H-pyrrol-2-yl, 3-methyl-4-(4-methylpiperidin-1-yl-carbonyl)-1H-pyrrol-2-yl, 3,5-dimethyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-4,5,6,7-tetrahydro-1H-indol-2-yl, 3-(2-carboxyethyl)-5-methyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-5-ethyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-4-ethoxycarbonyl-5-methyl-1H-pyrrol-2-yl, 4-(2-carboxyethyl)-3,5-dimethyl-1H-pyrrol-2-yl, 4-(carboxymethyl)-3,5-dimethyl-1H-pyrrol-2-yl, indol-2-yl, 4,5,6,7-tetrahydroindol-2-yl, 5-(2-morpholin-4-ylethyloxy)indol-2-yl, 3-(carboxy)-5-methyl-1H-pyrrol-2-yl, 5-carboxy-3-methyl-1H-pyrrol-2-yl, 3-(3-morpholin-4-ylpropyl)-4,5,6,7-tetrahydroindol-2-yl, 4-(2-diethylaminoethylaminocarbonyl)-3,5-dimethyl-1H-pyrrol-2-yl, 4-(4-methylpiperazin-1-ylcarbonyl)-3,5-dimethyl-1H-pyrrol-2-yl, 5-(4-methylpiperazin-1-ylcarbonyl)-3-methyl-1H-pyrrol-2-yl, 5-(ethoxycarbonyl)-4,5,6,7-tetrahydro-2H-isoindol-3-yl, 4-(pyridin-4-ylaminocarbonyl)-3-phenyl-5-methyl-1H-pyrrol-2-yl, 5-methylthiophen-2-yl, 3-(2-carboxyethyl)-5-ethoxycarbonyl-4-methyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-4-carboxy-1H-pyrrol-2-yl, 3-(4-hydroxyphenyl)-4-ethoxycarbonyl-1H-pyrrol-2-yl, 4-(morpholin-4-ylcarbonyl)-3-methyl-1H-pyrrol-2-yl, 4-(piperidin-1-ylcarbonyl)-3-methyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-5-(ethoxycarbonyl)-4-methyl-1H-pyrrol-2-yl, 3-(2-carboxyethyl)-4-(carboxy)-1H-pyrrol-2-yl, 3-(methyl)-4-(benzylaminocarbonyl)-1H-pyrrol-2-yl, 3-methyl-4-(pyridin-4-ylmethylaminocarbonyl)-1H-pyrrol-2-yl, 3-methyl-4-[3-(2-oxopyrrolidin-1-yl)propyl-aminocarbonyl]-1H-pyrrol-2-yl, 5-methyl-4-ethoxycarbonyl-3-[3-(4-methylpiperazin-1-yl)propyl]-1H-pyrrol-2-yl, or 3,5-dimethyl-4-(4-methylpiperazin-1-ylaminocarbonyl)-1H-pyrrol-2-yl.

14. The compound of claim 13, wherein R<sup>1</sup> and R<sup>2</sup> are hydrogen.

15. The compound of claim 14, wherein Het is pyridin-4-yl.

16. The compound of claim 14, wherein Het is piperidin-4-yl.

5 17. The compound of claim 1, wherein Q is selected from the group consisting of:



18. A pharmaceutical composition comprising a compound  
10 or salt of claim 1 and a pharmaceutically acceptable carrier or excipient.

19. A pharmaceutical composition comprising a compound  
15 or salt of claim 15 and a pharmaceutically acceptable carrier or excipient.

20. A pharmaceutical composition comprising a compound  
or salt of claim 16 and a pharmaceutically acceptable carrier or excipient.

21. A method for treating a protein kinase related disorder comprising administering to an organism in need thereof a therapeutically effective amount of a compound or salt of claim 1.

22. A method for treating a protein kinase related disorder comprising administering to an organism in need

thereof a therapeutically effective amount of a compound or salt of claim 15.

23. A method for treating a protein kinase related disorder comprising administering to an organism in need thereof a therapeutically effective amount of a compound or salt of claim 16.

24. The method of claim 21, 22, or 23 wherein said protein kinase related disorder is selected from the group consisting of a receptor tyrosine kinase related disorder, a non-receptor tyrosine kinase related disorder and a serine-threonine kinase related disorder.

25. The method of claim 21, 22, or 23 wherein said protein kinase related disorder is selected from the group consisting of an EGFR related disorder, a PDGFR related disorder, an IGFR related disorder, a flk related disorder, a CDK related disorder, a Met kinase related disorder and a Src kinase related disorder.

26. The method of claim 21, 22, or 23 wherein said protein kinase related disorder is a cancer selected from the group consisting of squamous cell carcinoma, astrocytoma, Kaposi's sarcoma, glioblastoma, lung cancer, bladder cancer, head and neck cancer, melanoma, ovarian cancer, prostate cancer, breast cancer, small-cell lung cancer, glioma, colorectal cancer, genitourinary cancer and gastrointestinal cancer.

27. The method of claim 21, 22, or 23 wherein said protein kinase related disorder is selected from the group consisting of diabetes, an autoimmune disorder, a hyperproliferation disorder, restenosis, fibrosis, psoriasis, von Heppel-Lindau disease, osteoarthritis,

rheumatoid arthritis, angiogenesis, an inflammatory disorder, an immunological disorder and a cardiovascular disorder.

5           28. The method of claim 21, 22, or 23 wherein said protein kinase related disorder is a CDK-related disorder.

          29. The method of claim 21, 22, or 23 wherein said organism is a human.